eACS: Attentional Control in the Presence of Emotion

Tom J. Barry[1], Dirk Hermans[1], Bert Lenaert[1], Elise Debeer[1], & James W. Griffith[1,2]
[1]Centre for Learning Psychology and Experimental Psychopathology, University of Leuven, Leuven, Belgium
[2]Department of Medical Social Sciences, Northwestern University, Chicago, USA

KATHOLIEKE UNIVERSITEIT LEUVEN

Background

Attention & Psychopathology

Anxious and depressed people show deficits in attentional control (AC). They selectively attend to threat at the expense of other things.

Attentional Control Scale (ACS) is an often used self-report measure of the ability to focus and shift attention that correlates with indices of anxiety and depression.

Compensatory control

ACS items are emotionally neutral.

In neutral situations, some people can compensate for their AC deficits.

Therefore even some people who report high AC in the ACS, might actually show low AC in more emotional situations.

To account for this we developed the emotional ACS (eACS).

Hypotheses

- The eACS will have one factor for emotional AC.
- eACS will explain additional, independent, variance in psychopathology, even when selecting only high ACS scorers.

Method

Participants

Total: 424 KULeuven undergrads.

Factor analysis (FA): 327 who completed ≥80% eACS.

Main analysis: 312 who completed ≥80% of all items.

Measures

Attentional Control Scale
(ACS; Derryberry & Reed, 2002)

Emotional ACS
(eACS; Barry et al., 2013)

State Trait Anxiety Inventory – Trait
(STAI-T; Spielberger et al., 1983)

Beck Depression Inventory – II
(BDI-II; Beck et al., 1996)

Analytical procedure

FA: Parallel analysis informed selection of no. of factors to be extracted from EFA. Frequency distributions, factor loadings and correlations between items informed inclusion of items in eACS.

Main analysis: two regressions.

DVs: BDI-II and STAI-T

Step 1. Age & Gender

Step 2. STAI-T/BDI-II

Step 3. ACS

Step 4. eACS

Step 5. ACS*eACS interaction

Results

Factor analysis

EFA and comparison with content of items suggested 1 general factor for emotional AC in eACS.

4 items were excluded, leaving 14 items for main analysis.

Main analysis

Positive correlation between eACS and ACS ($r = .62$, $p < .001$).

	B	*SE* (*B*)	β
DV: STAI-T			
2. *BDI-II* ($\Delta R^2 = .49$)	0.84	0.06	.57***
3. *ACS* ($\Delta R2 = .07$)	-0.19	0.06	-.15**
4. *eACS* ($\Delta R^2 = .03$)	-0.35	0.07	-.23***
5. *ACS*eACS* ($\Delta R^2 = .00$)	-0.01	0.01	-0.05
DV: BDI-II			
2. *STAI-T* ($\Delta R^2 = .48$)	0.47	0.03	.69***
3. *ACS* ($\Delta R^2 = .00$)	-0.02	0.05	-0.03
4. *eACS* ($\Delta R^2 = .00$)	-0.01	0.06	-0.01
5. *ACS*eACS* ($\Delta R^2 = .00$)	0	0.01	0.02

eACS and ACS only explained a significant amount of the variance in BDI-II score when STAI-T was not included at step 2. Again eACS showed a slightly larger association (ACS: $\beta = -.50$, and eACS: $\beta = -.53$, $p < .001$).

Selecting participants high in ACS – significant negative correlation between eACS and STAI-T and BDI-II ($r = -.42$, $p < .001$ and $r = -.27$ $p < .005$).

Conclusions

AC and Emotion

Results support the claim that anxiety and depressive symptoms are associated with low AC.

That the ACS and eACS explained independent variance suggests that both relate to valid constructs.

Considering AC from emotional perspective might allow us to better explain AC deficits and relationship with disorder.

Implications

Might allow investigators to better predict attentional biases and the development of clinical disorders.

Future

Needs to be compared with a behavioural measure of AC.

Is the same relationship evident in a clinical sample?

Reference

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